DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027942
Date Inspected: 11-Jul-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Job Site

CWI Name: As noted below.

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☐ Yes	☑ No	
Electrode to specification:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☐ Yes	☐ No	☑ N/A	**Weld Procedures Followed:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☐ Yes	☐ No	☑ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
				Approved WPS:	☐ Yes	☐ No	☑ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower Component

Summary of Items Observed:

Quality Assurance Inspector (QA) William Clifford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

Ultrasonic Testing of ESW (retest)
ESW G, Face B:

This QA performed Ultrasonic Testing (UT) on Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as “ESW G” face B. Location (Y=8000~8100 of this weld was inspected using this testing method.

This weld was previously tested by this QA and QC ultrasonic technician Scott Kortum in accordance with supplemental procedure SE-UT-D1.5-CT-108-ESW-R5. Mr. Kortum’s findings did not match the original findings of this QA. This QA retested this previously tested area and confirmed the original recordable indication rating, Y location, and depth. Mr. Kortum then retested the same area and confirmed this QA’s findings. Mr. Kortum updated his log and report to reflect this new information.

This QA observed one (1) recordable indication at the time of testing.
Y= 8050mm, X= -10mm
L= 25mm
A= 64db, B= 54db, C= 7db, D= 3db
SP= 108.6mm, DP= 36.61mm
This QA originally generated a TL-6027 UT report on 07-06-12.

Reporting of ESW Ultrasonic Testing

On 07/10/12 this QA tested ESW “mock-up” and Performance Qualification Record (PQR) test welds for the Tower Shear Plate ESW welds of the San Francisco / Oakland Bay Bridge (SFOBB) Self Anchored Suspension (SAS) project.

Welds tested were samples of 60mm-70mm butt-joint ESW, 60mm-70mm t-joint ESW, and 60mm-70mm skewed t-joint ESW. The “mock-up” weld was a 100mm-80mm transition butt-joint ESW weld. This QA tested approximately 1880mm of the “mock-up”.

Weld samples were tested with the probe oriented in the “E scan” direction for attempted discovery of transverse indications. Due to the limited scanning space available, the standard scanning pattern as prescribed by AWS D1. 5 could not be used to perform a perpendicular full volumetric examination of these ESW welds. Limited scanning was used to find a distinct and repeatable set of returned signals (3 signals) that have been measured to be located at the outer grain boundaries and approximate center of the ESW weld.

This QA reviewed and reported compiled data for this testing. Photographs have been organized and edited for text and submitted with the report dated 07/10/12. A TL-6027 UT report has also been issued for the date of 07/10/12. This UT report contains pertinent information for recorded transverse indications found during “mock-up” and PQR testing.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

Conversations were relevant to testing performed.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Clifford,William	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer